

REMARKS

Receipt of the office action mailed December 9, 2008 is acknowledged. Claims 1-22 are pending in the application. Claims 14 and 18 are objected to because of various informalities. Claims 1-3, 5, 6, 11 and 19-21 are rejected under 35 U.S.C. §102(b) as being anticipated by Adamson (U.S. Patent Publication No. 2002/0014368). Claims 1, 2, 4, 15 and 22 are rejected under 35 U.S.C. §102(b) as being anticipated by Smythe (U.S. Patent No. 1,871,243). Claims 7-10, 12-14 and 16-18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Adamson in view of Daniel (U.S. Patent No. 3,957,134). New claims 23-26 are submitted herewith. In keeping with the foregoing amendments and the following argument, reconsideration of the rejected claims and allowance of the newly-submitted claims is respectfully requested.

Claims 14 and 18 have been amended to provide antecedent basis for the branch points. Accordingly, the objection is overcome.

The rejections of claim 1 are fatally flawed and must be withdrawn. Claim 1 recites, in part, a sound passage space, with the sound passage space configured to 1) branch in plural stages proceeding from the inlet opening to the outlet opening; to 2) form a plurality of sound wave guide paths extending from the inlet opening to the outlet opening. Consequently, the number of sound wave guide paths increases in a stepwise manner from the inlet opening toward the outlet opening. A review of Figure 3, for example, shows that the sound passage branches (first to 2 paths, then to 4 paths, then to 8 paths, etc), in plural stages from the inlet opening to the outlet opening (the split from a single path to 2 paths occurs at branch point D1, the split from 2 paths to 4 occurs at D2, the split from 4 paths to 8 occurs at D3, etc.). Eventually, according to the example of Figure 3, the sound passage branches to 32 outlets numbered t1 through t32.

In contrast, the cited references fail to disclose a sound passage that branches in plural stages. Instead, both references merely disclose speaker structures in which the sound passage branches at only a single location, into plural paths. Therefore, the cited references fail to disclose that the feature of claim 1 “the sound passage space being configured to *repeatedly branch in plural stages* from the inlet opening toward the outlet opening.”

More specifically, both Figures 4a and 4b of Adamson clearly show each of the individual sound wave paths E-E, F-F, G-G, etc., pass through the sound chamber without

ever branching. In other words, the number of sound wave paths stays the same as sound passes from the inlet to the outlet. Moreover, there can be no proper suggestion to modify the reference in any way to reach the claimed invention, as the needed modification would require one to completely re-configure the expressly-taught sound chamber, which is precisely shaped to form “a conduit 17 for the transmission and shaping of a sound wave,” such that the sound waves are shaped as shown in Figures 4a and 4b. Consequently, there can be no proper *prima facie* case of obviousness based even in part on Adamson.

Smythe suffers the same deficiencies as Adamson. The paths of Smythe are divided by helical partitions (see line 73 of the reference), but the spiraling sound wave paths never branch within the horn even a single time, much less branch in plural stages as claimed by claim 1. The number of inlet is equal to the number of outlets. There can be no proper suggestion to modify the reference to reach the claimed invention without using Applicant’s disclosure as a template, and without destroying the expressly-taught aspects of Smythe.

Consequently, neither reference anticipates the invention of claim 1. Both references further fail to teach or suggest all of the limitations of claim 1, and thus there cannot be a proper *prima facie* case of obviousness. Claim 1 is therefore in allowable form, as are dependent claims 2-22, all of which depend from claim 1 either directly or via intervening claims.

With respect to the rejection of various dependent claims based on the Daniel reference, the Daniel reference, like Adamson and Smythe, uses a structure in which the inlets and outlets are equal in number, thus precluding any branching in plural stages as claimed.

New claims 23-26 are submitted herewith for consideration. New claim 23 relates to a sound wave guide structure for a speaker system and comprises a sound passage space connecting an inlet opening to an outlet opening and defining a longitudinal axis, a plurality of branch points formed within the sound passage space, each of the branch points arranged to branch a portion of the sound passage space from one branch path to two branch paths, and a plurality of stages spaced apart along the longitudinal axis, each of the plurality of branch points disposed at one of the plurality of stages.

By comparison, the cited references do not disclose or even suggest the invention of claim 23. The references do not teach or suggest a plurality of branch points formed within

the space that branch from one path to two, and do not teach or suggest the branch points disposed at a plurality of stages measured along the longitudinal axis of the device. For the reasons given above with respect to claim 1, there can be no proper suggestion to modify either reference to reach the invention of claim 23 without using hindsight or without destroying expressly-taught aspects of both references. Accordingly, new claim 23 is in allowable form.

New dependent claim 24 recites that the sound passage space includes a throat portion having a base end adjacent the inlet opening and a tip end, and wherein a first one of the plurality of stages is disposed adjacent the base end of the throat portion and a second one of the plurality of stages is disposed adjacent a midpoint of the throat portion measured along the longitudinal axis. None of the art of record teaches or suggests the invention of claim 24.

New dependent claim 25 recites that a third one of the plurality of stages is disposed adjacent a midpoint between the second one of the plurality of stages and the tip end of the throat measured along the longitudinal axis, while new dependent claim 26 recites that the outlet opening is slit shaped and the branch paths are arranged to exit the tip end of the throat portion aligned along the slit shaped outlet opening. Again, none of the cited references teaches or suggests the invention of claims 25 or 26.

Accordingly, new claims 23-26 are in allowable form.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

May 6, 2009

Respectfully submitted,

By 

David C. Read

Registration No.: 39,811

MARSHALL, GERSTEIN & BORUN LLP

233 South Wacker Drive, Suite 6300

Sears Tower

Chicago, Illinois 60606-6357

(312) 474-6300

Attorney for Applicant